CREATIVE BIOMART®
Assay Kit

Caspase-2 assay Kit for drug discovery

Product Information

Cat.No. Kit-0159

Size

96 wells

Description

Depending on their tissue of origin, the cells of caspase-2-deficient mice can be either more or less resistant to apoptosis induction than their wild-type counterparts. This would seem to imply that caspase-2 plays more the role of an apoptosis regulator than initiator. This role may be played in part via expression of the splicing isoforms caspase-2L (proapoptotic) and caspase-2S (anti-apoptotic). A possible exception, although perhaps one that proves the rule, is Salmonella-induced macrophage apoptosis, where caspase-2 may be acting with caspase-1 as a co-initiator. Research indicates that caspase-2L promotes apoptosis by causing release of proapoptotic mitochondrial proteins such as cytochrome c and Smac. Possible mechanisms include cleavage of Bid, direct, Bid-independent, action on the mitochondria and release of an unidentified nuclear factor. The Caspase-2 Assay Kit for Drug Discovery is a complete assay system designed to measure protease activity of caspase-2. Caspase-2 is unique among the caspases in its strong preference for pentapeptides over tetrapeptides as artifical substrates. The kit contains both a colorimetric substrate (Ac-VDVAD-pNA; Km= 53 μM) and a fluorogenic substrate (Ac-VDVAD-AMC; Km= 80 μM) based on the pentapeptide recognition sequence VDVAD. Cleavage of the p-nitroaniline (pNA) from the colorimetric substrate increases absorbance at 405 nm. The fluorescent assay is based on the cleavage of 7-amino-4-methylcoumarin (AMC) dye from the C-terminus of the peptide substrate which increases its fluorescence intensity at 460 nm. The kit is useful to screen inhibitors of caspase-2, a potential therapeutic target. A potent inhibitor Ac-VDVAD-CHO (aldehyde; Ki= 3.5 nM) is included for use as a control.

Applications

Colorimetric detection, Fluorescence microscopy, HTS

Storage

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

CREATIVE BIOMART®
Assay Kit

Caspase-2 assay Kit for drug discovery

-80°C

Kit Components

Caspase-2 enzyme (human) (recombinant), Substrate (Ac-VDVAD-pNA), Calibration Standard, AMC Substrate (Ac-VDVAD-AMC), AMC Calibration Standard, Inhibitor (Ac-VDVAD-CHO), Assay Buffer, 1/2-volume Microplate.

Tel: 1-631-559-9269 1-516-512-3133

Email:info@creative-biomart.org

Fax:1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA